

## SEQUENCE LISTING

&lt;110&gt; Statens Serum Institut

&lt;120&gt; Hybrids of M. tuberculosis Antigens

&lt;130&gt; 20486US03

&lt;160&gt; 12

&lt;170&gt; FastSEQ for Windows Version 3.0

&lt;210&gt; 1

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Mycobacterium tuberculosis

&lt;400&gt; 1

Met	Thr	Glu	Gln	Gln	Trp	Asn	Phe	Ala	Gly	Ile	Glu	Ala	Ala	Ala	Ser
1			5						10					15	
Ala	Ile	Gln	Gly	Asn	Val	Thr	Ser	Ile	His	Ser	Leu	Leu	Asp	Glu	Gly
		20						25					30		
Lys	Gln	Ser	Leu	Thr	Lys	Leu	Ala	Ala	Ala	Trp	Gly	Gly	Ser	Gly	Ser
		35					40					45			
Glu	Ala	Tyr	Gln	Gly	Val	Gln	Gln	Lys	Trp	Asp	Ala	Thr	Ala	Thr	Glu
	50					55				60					
Leu	Asn	Asn	Ala	Leu	Gln	Asn	Leu	Ala	Arg	Thr	Ile	Ser	Glu	Ala	Gly
65					70					75					80
Gln	Ala	Met	Ala	Ser	Thr	Glu	Gly	Asn	Val	Thr	Gly	Met	Phe	Ala	
				85					90					95	

&lt;210&gt; 2

&lt;211&gt; 325

&lt;212&gt; PRT

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;221&gt; SIGNAL

&lt;222&gt; (1)...(40)

&lt;400&gt; 2

Met	Thr	Asp	Val	Ser	Arg	Lys	Ile	Arg	Ala	Trp	Gly	Arg	Arg	Leu	Met
-40					-35					-30				-25	
Ile	Gly	Thr	Ala	Ala	Ala	Val	Val	Leu	Pro	Gly	Leu	Val	Gly	Leu	Ala
				-20					-15					-10	
Gly	Gly	Ala	Ala	Thr	Ala	Gly	Ala	Phe	Ser	Arg	Pro	Gly	Leu	Pro	Val
			-5					1				5			
Glu	Tyr	Leu	Gln	Val	Pro	Ser	Pro	Ser	Met	Gly	Arg	Asp	Ile	Lys	Val
	10					15				20					
Gln	Phe	Gln	Ser	Gly	Gly	Asn	Asn	Ser	Pro	Ala	Val	Tyr	Leu	Leu	Asp
25					30					35				40	
Gly	Leu	Arg	Ala	Gln	Asp	Asp	Tyr	Asn	Gly	Trp	Asp	Ile	Asn	Thr	Pro
				45					50				55		
Ala	Phe	Glu	Trp	Tyr	Tyr	Gln	Ser	Gly	Leu	Ser	Ile	Val	Met	Pro	Val
			60					65					70		
Gly	Gly	Gln	Ser	Ser	Phe	Tyr	Ser	Asp	Trp	Tyr	Ser	Pro	Ala	Cys	Gly
		75					80					85			
Lys	Ala	Gly	Cys	Gln	Thr	Tyr	Lys	Trp	Glu	Thr	Phe	Leu	Thr	Ser	Glu
	90					95					100				
Leu	Pro	Gln	Trp	Leu	Ser	Ala	Asn	Arg	Ala	Val	Lys	Pro	Thr	Gly	Ser
105					110					115				120	
Ala	Ala	Ile	Gly	Leu	Ser	Met	Ala	Gly	Ser	Ser	Ala	Met	Ile	Leu	Ala

Ala	Tyr	His	Pro	125	Gln	Gln	Phe	Ile	Tyr	130	Ala	Gly	Ser	Leu	Ser	135	Ala	Leu
Leu	Asp	Pro	140	Gln	Gly	Met	Gly	Pro	Ser	145	Ser	Leu	Ile	Gly	Leu	150	Ala	Met
Gly	Asp	Ala	155	Gly	Gly	Tyr	Lys	Ala	Ala	160	Asp	Met	Trp	Gly	Pro	165	Ser	Ser
Asp	Pro	Ala	170	Trp	Glu	Arg	Asn	Asp	Pro	175	Thr	Gln	Gln	Ile	Pro	180	Lys	Leu
Val	Ala	Asn	185	Asn	Thr	Arg	Leu	Trp	Val	190	Tyr	Cys	Gly	Asn	Gly	200	Thr	Pro
Asn	Glu	Leu	205	Gly	Gly	Ala	Asn	Ile	Pro	210	Ala	Glu	Phe	Leu	Glu	215	Asn	Phe
Val	Arg	Ser	220	Ser	Asn	Leu	Lys	Phe	Gln	225	Asp	Ala	Tyr	Asn	Ala	230	Ala	Gly
Gly	His	Asn	235	Ala	Val	Phe	Asn	Phe	Pro	240	Pro	Asn	Gly	Thr	His	245	Ser	Trp
Glu	Tyr	Trp	250	Gly	Ala	Gln	Leu	Asn	Ala	255	Met	Lys	Gly	Asp	Leu	260	Gln	Ser
Ser	Leu	Gly	265	Ala	Gly	270	275	280										

<210> 3  
 <211> 404  
 <212> PRT  
 <213> Artificial Sequence

Met	Ala	Thr	Val	Asn	Arg	Ser	Arg	His	His	His	His	His	His	His	His	His	His	His
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Ile	Glu	Gly	Arg	Ser	Phe	Ser	Arg	Pro	Gly	Leu	Pro	Val	Glu	Tyr	Leu			
Gln	Val	Pro	20	Ser	Pro	Ser	Met	Gly	Arg	Asp	Ile	Lys	Val	Gln	Phe	Gln		
Ser	Gly	Pro	35	Asn	Asn	Ser	Pro	Ala	Val	Tyr	Leu	Leu	Asp	Gly	Leu	Arg		
Ala	Gln	Asp	50	Asp	Tyr	Asn	Gly	Trp	Asp	Ile	Asn	Thr	Pro	Ala	Phe	Glu		
Trp	Tyr	Tyr	65	Gln	Ser	Gly	Leu	Ser	Ile	Val	Met	Pro	Val	Gly	Gly	Gln		
Ser	Ser	Phe	85	Tyr	Ser	Asp	Trp	Tyr	Ser	Pro	Ala	Cys	Gly	Lys	Ala	Gly		
Cys	Gln	Thr	100	Tyr	Lys	Trp	Glu	Thr	Phe	Leu	Thr	Ser	Glu	Leu	Pro	Gln		
Trp	Leu	Ser	115	Ala	Asn	Arg	Ala	Val	Lys	Pro	Thr	Gly	Ser	Ala	Ala	Ile		
Gly	Leu	Ser	130	Met	Ala	Gly	Ser	Ser	Ala	Met	Ile	Leu	Ala	Ala	Tyr	His		
Pro	Gln	Gln	145	Phe	Ile	Tyr	Ala	Gly	Ser	Leu	Ser	Ala	Leu	Leu	Asp	Pro		
Ser	Gln	Gly	165	Met	Gly	Pro	Ser	Leu	Ile	Gly	Leu	Ala	Met	Gly	Asp	Ala		
Gly	Gly	Tyr	180	Lys	Ala	Ala	Asp	Met	Trp	Gly	Pro	Ser	Ser	Asp	Pro	Ala		
Trp	Glu	Arg	195	Asn	Asp	Pro	Thr	Gln	Gln	Ile	Pro	Lys	Leu	Val	Ala	Asn		
Asn	Thr	Arg	210	Leu	Trp	Val	Tyr	Cys	Gly	Asn	Gly	Thr	Pro	Asn	Glu	Leu		
Gly	Gly	Ala	225	Asn	Ile	Pro	Ala	Glu	Phe	Leu	Glu	Asn	Phe	Val	Arg	Ser		
Ser	Asn	Leu	245	Lys	Phe	Gln	Asp	Ala	Tyr	Asn	Ala	Ala	Gly	Gly	His	Asn		
Ala	Val	Phe	260	Asn	Phe	Pro	Pro	Asn	Gly	Thr	His	Ser	Trp	Glu	Tyr	Trp		
			275					280										

Gly Ala Gln Leu Asn Ala Met Lys Gly Asp Leu Gln Ser Ser Leu Gly  
 290 295 300  
 Ala Gly Lys Leu Ala Met Thr Glu Gln Gln Trp Asn Phe Ala Gly Ile  
 305 310 315 320  
 Glu Ala Ala Ala Ser Ala Ile Gln Gly Asn Val Thr Ser Ile His Ser  
 325 330 335  
 Leu Leu Asp Glu Gly Lys Gln Ser Leu Thr Lys Leu Ala Ala Ala Trp  
 340 345 350  
 Gly Gly Ser Gly Ser Glu Ala Tyr Gln Gly Val Gln Gln Lys Trp Asp  
 355 360 365  
 Ala Thr Ala Thr Glu Leu Asn Asn Ala Leu Gln Asn Leu Ala Arg Thr  
 370 375 380  
 Ile Ser Glu Ala Gly Gln Ala Met Ala Ser Thr Glu Gly Asn Val Thr  
 385 390 395 400  
 Gly Met Phe Ala

<210> 4  
 <211> 403  
 <212> PRT  
 <213> Artificial Sequence

<400> 4  
 Met Ala Thr Val Asn Arg Ser Arg His His His His His His His His  
 1 5 10 15  
 Ile Glu Gly Arg Ser Met Thr Glu Gln Gln Trp Asn Phe Ala Gly Ile  
 20 25 30  
 Glu Ala Ala Ala Ser Ala Ile Gln Gly Asn Val Thr Ser Ile His Ser  
 35 40 45  
 Leu Leu Asp Glu Gly Lys Gln Ser Leu Thr Lys Leu Ala Ala Ala Trp  
 50 55 60  
 Gly Gly Ser Gly Ser Glu Ala Tyr Gln Gly Val Gln Gln Lys Trp Asp  
 65 70 75 80  
 Ala Thr Ala Thr Glu Leu Asn Asn Ala Leu Gln Asn Leu Ala Arg Thr  
 85 90 95  
 Ile Ser Glu Ala Gly Gln Ala Met Ala Ser Thr Glu Gly Asn Val Thr  
 100 105 110  
 Gly Met Phe Ala Lys Leu Phe Ser Arg Pro Gly Leu Pro Val Glu Tyr  
 115 120 125  
 Leu Gln Val Pro Ser Pro Ser Met Gly Arg Asp Ile Lys Val Gln Phe  
 130 135 140  
 Gln Ser Gly Gly Asn Asn Ser Pro Ala Val Tyr Leu Leu Asp Gly Leu  
 145 150 155 160  
 Arg Ala Gln Asp Asp Tyr Asn Gly Trp Asp Ile Asn Thr Pro Ala Phe  
 165 170 175  
 Glu Trp Tyr Tyr Gln Ser Gly Leu Ser Ile Val Met Pro Val Gly Gly  
 180 185 190  
 Gln Ser Ser Phe Tyr Ser Asp Trp Tyr Ser Pro Ala Cys Gly Lys Ala  
 195 200 205  
 Gly Cys Gln Thr Tyr Lys Trp Glu Thr Phe Leu Thr Ser Glu Leu Pro  
 210 215 220  
 Gln Trp Leu Ser Ala Asn Arg Ala Val Lys Pro Thr Gly Ser Ala Ala  
 225 230 235 240  
 Ile Gly Leu Ser Met Ala Gly Ser Ser Ala Met Ile Leu Ala Ala Tyr  
 245 250 255  
 His Pro Gln Gln Phe Ile Tyr Ala Gly Ser Leu Ser Ala Leu Leu Asp  
 260 265 270  
 Pro Ser Gln Gly Met Gly Pro Ser Leu Ile Gly Leu Ala Met Gly Asp  
 275 280 285  
 Ala Gly Gly Tyr Lys Ala Ala Asp Met Trp Gly Pro Ser Ser Asp Pro  
 290 295 300  
 Ala Trp Glu Arg Asn Asp Pro Thr Gln Gln Ile Pro Lys Leu Val Ala  
 305 310 315 320  
 Asn Asn Thr Arg Leu Trp Val Tyr Cys Gly Asn Gly Thr Pro Asn Glu

325 330 335  
 Leu Gly Gly Ala Asn Ile Pro Ala Glu Phe Leu Glu Asn Phe Val Arg  
 340 345 350  
 Ser Ser Asn Leu Lys Phe Gln Asp Ala Tyr Asn Ala Ala Gly Gly His  
 355 360 365  
 Asn Ala Val Phe Asn Phe Pro Pro Asn Gly Thr His Ser Trp Glu Tyr  
 370 375 380  
 Trp Gly Ala Gln Leu Asn Ala Met Lys Gly Asp Leu Gln Ser Ser Leu  
 385 390 395 400  
 Gly Ala Gly

<210> 5  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> M. tuberculosis

<400> 5  
 ggcgccggca agcttgccat gacagagcag cagtgg 36

<210> 6  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<400> 6  
 cgaactcgcc ggatcccggtg ttctgc 26

<210> 7  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<400> 7  
 ggcaaccgag agatctttct cccggccggg gc 32

<210> 8  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<400> 8  
 ggcaagcttg ccggcgcta acgaact 27

<210> 9  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<400> 9  
 ggaccagat ctatgacaga gcagcagtgg 30

<210> 10  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<400> 10  
 ccggcagccc cggccgggag aaaagctttg cgaacatccc agtgacg 47

<210> 11  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<400> 11  
gttcgcaaag cttttctccc ggccggggct gccggtcgag tacc 44

<210> 12  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<400> 12  
ccttcggtgg atcccgtcag 20

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